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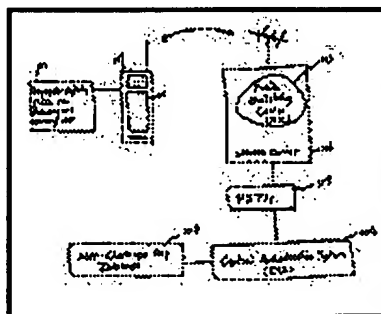
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 (54) METHOD OF USING FINGERPRINTS TO AUTHENTICATE WIRELESS COMMUNICATIONS
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 (81) AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU ; AP (GH, KE, LS, MW, SD, SZ, UG, ZW); EA (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM); EP (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE); OA (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG)

Abstract

Disclosed are a system and a method employing a user's *fingerprint* to authenticate a wireless communication. The user's personal *fingerprint* is employed as the secret key in the context of a modified "challengeresponse" scenario. The system includes a *fingerprint* capture module on a mobile personal wireless communication



device (e.g., a wireless *telephone*) and a central authentication system coupled to a conventional mobile switching center. The central authentication system contains information that associates each mobile identification number ("MIN") with a particular user's *fingerprint*. When a wireless communication is to be initiated, the central authentication system engages in a challenge-response authentication with the mobile switching station or the wireless phone using the stored *fingerprint* associated with the MIN through the common air interface. The correct response from the mobile station will only be generated when the user's *fingerprint* entered through the *fingerprint* capture module attached to the mobile station matches the information sent from the central authentication system, and only calls placed from authorized users are connected.



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